

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-7 (Cancelled).

8 (Currently amended). An isolated DNA molecule consisting of a sequence coding for a polypeptide tolerogen which suppresses the autoimmune response of an individual to acetylcholine receptor, wherein said polypeptide tolerogen is selected from the group consisting of:

(i) a polypeptide consisting of amino acid residues 1-121 of SEQ ID NO:2;

(ii) a polypeptide consisting of amino acid residues 122-210 of SEQ ID NO:2;

(iii) a polypeptide H α 1-205 consisting of amino acid residues 1-205 of SEQ ID NO:2; and

(iv) a polypeptide as defined in (i)-(iii), fused to an additional polypeptide at its N- and/or C-termini, wherein a human acetylcholine receptor α -subunit portion, consisting of amino acid residues 1-121 of SEQ ID NO:2, amino acid residues 122-210 of SEQ ID NO:2, or amino acid residues 1-205 of SEQ ID NO:2 of said fused polypeptide does not assume the native

conformation of the α subunit of the human acetylcholine receptor as determined from a binding assay to α -bungarotoxin, where weaker binding to α -bungarotoxin when compared to the corresponding portion from the acetylcholine receptor (AChR) α -subunit extracellular domain indicates said fused polypeptide has not assumed the native conformation of the α -subunit of AChR,

with the proviso that said polypeptide tolerogen does not consist of a sequence consisting of residues 1-210 of SEQ ID NO:2 ~~or said sequence~~ and with the proviso that said polypeptide tolerogen does not consist of residues 1-210 of SEQ ID NO:2 and one additional residue.

9(Previously presented). An isolated DNA molecule according to claim 8, which is selected from the group consisting of:

(i) a DNA molecule consisting of the nucleotide sequence of nucleotides 1 to 363 of SEQ ID NO:1;

(ii) a DNA molecule consisting of the nucleotide sequence of nucleotides 364 to 630 of SEQ ID NO:1;

(iii) a DNA molecule consisting of nucleotides 1 to 615 of SEQ ID NO:1; and

(iv) a DNA molecule which codes for a polypeptide encoded by the DNA sequence of (i), (ii) or (iii).

Claims 10 and 11 (Cancelled).

12(Previously presented). An isolated DNA molecule consisting of the nucleotide sequence corresponding to nucleotides 1 to 363 of SEQ ID NO:1.

Claim 13 (Cancelled).

14(Previously presented). An isolated DNA molecule according to claim 9, which consists of the nucleotide sequence of nucleotides 364 to 630 of SEQ ID NO:1.

15(Previously presented). An isolated DNA molecule according to claim 36, wherein said additional polypeptide is glutathione S-transferase (GST) and is fused to the human acetylcholine receptor α subunit portion at its N- and /or C-termini.

16(Previously presented). A replicable expression vector comprising a DNA molecule according to claim 8.

17(Previously presented). An isolated prokaryotic or isolated eukaryotic host cell transformed with the replicable expression vector of claim 16.

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18(Previously presented). A process for preparing a polypeptide which suppresses the autoimmune response of an individual to acetylcholine receptor, comprising:

- (i) culturing a host cell of claim 17 under conditions promoting expression; and
- (ii) isolating the expressed polypeptide.

Claims 19-24 (Cancelled)

25(Previously presented). An isolated DNA according to claim 8, wherein said polypeptide tolerogen consists of amino acid residues 1-121 of SEQ ID NO:2.

Claim 26 (Cancelled).

27(Previously presented). An isolated DNA according to claim 8, wherein said polypeptide tolerogen consists of amino acid residues 122-210 of SEQ ID NO:2.

Claims 28 and 29 (Cancelled).

30(Previously presented). An isolated DNA according to claim 8, wherein said polypeptide is said fusion polypeptide as defined in (iv).

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31 (Previously presented). An isolated DNA according to claim 30, wherein said additional polypeptide is glutathione S-transferase.

Claims 32-35 (Cancelled).

36 (Currently amended). An isolated DNA molecule coding for a polypeptide tolerogen which suppresses the autoimmune response of an individual to acetylcholine receptor, wherein said polypeptide tolerogen is either (a) a polypeptide consisting of amino acid residues 1-121 of SEQ ID NO:2 fused to an additional polypeptide at its N- and/or C-termini, (b) a polypeptide consisting of amino acid residues 1-205 fused to an additional polypeptide at its N- and/or C-termini, or (c) a polypeptide H α 1-210 consisting of amino acid residues 1-210 of SEQ ID NO:2 fused to an additional polypeptide at its N- and/or C-termini, wherein a human acetylcholine receptor α -subunit portion, consisting of amino acid residues 1-121 of SEQ ID NO:2, amino acid residues 1-205 of SEQ ID NO:2, or amino acid residues 1-210 of SEQ ID NO:2, of said fused polypeptide does not assume the native conformation of the α -subunit of the human acetylcholine receptor as determined from a binding assay to α -bungarotoxin, where weaker binding to α -bungarotoxin when compared to the corresponding portion from the acetylcholine receptor (AChR) α -subunit

extracellular domain indicates said fused polypeptide has not assumed the native conformation of the α -subunit of AchR, with the proviso that said polypeptide tolerogen does not consist of a sequence consisting of residues 1-210 of SEQ ID NO:2 ~~or said sequence~~ and with the proviso that said polypeptide tolerogen does not consist of residues 1-210 of SEQ ID NO:2 and one additional residue.

37(Previously presented). A replicable expression vector comprising a DNA molecule according to claim 36.

38(Previously presented). An isolated prokaryotic or isolated eukaryotic host cell transformed with the replicable expression vector of claim 37.

39(Previously presented). A process for preparing a polypeptide which suppresses the autoimmune response of an individual to acetylcholine receptor, comprising:

- (i) culturing a host cell of claim 38 under conditions promoting expression; and
- (ii) isolating the expressed polypeptide.

40(Previously presented). An isolated DNA according to claim 8, wherein said polypeptide tolerogen consists of amino acid residues 1-205 of SEQ ID NO:2.

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41(Previously presented). An isolated DNA according to claim 9, which consists of the nucleotide sequence of nucleotides 1 to 615 of SEQ ID NO:1.